

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
5 February 2004 (05.02.2004)

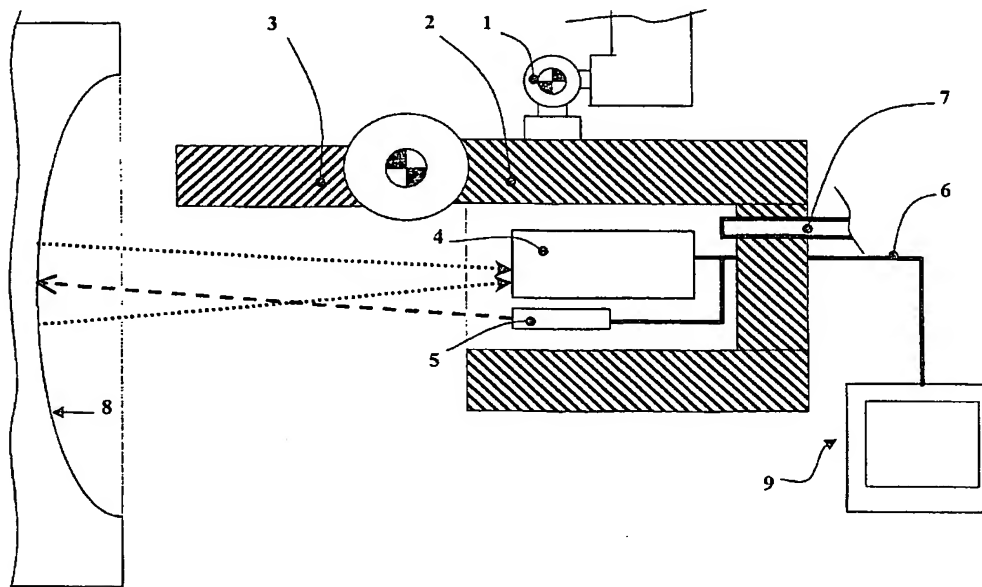
PCT

(10) International Publication Number
WO 2004/011891 A3

- (51) International Patent Classification⁷: **G01J 5/04**
- (21) International Application Number:
PCT/IB2003/002313
- (22) International Filing Date: 17 June 2003 (17.06.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
BO2002A000488 25 July 2002 (25.07.2002) IT
- (71) Applicant (for all designated States except US):
BARALDI CHEMGROUP SRL [IT/IT]; Via Lombardia 2/I-L, I-40060 Osteria Grande (Bologna) (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **RAONE, Cosimo** [IT/IT]; via Lombardia 2/I-L, I-40060 Osteria Grande (Bologna) (IT). **STRINGHETTI, Gianpiero** [IT/IT]; via Lombardia 2/I-L, I-40060 Osteria Grande (Bologna) (IT).
- (74) Agent: **TROMBETTI, Giola**; via Portazza 8, I-40139 Bologna (IT).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report:
11 November 2004

[Continued on next page]

(54) Title: METHOD TO DETECT THE DISTRIBUTION OF SERVICE TEMPERATURES IN A TECHNOLOGICAL PROCESS



(57) Abstract: A method to detect the distribution of service temperatures in a technological process that includes the automatic and programmable performance of explorative excursions done by means of an adjustable equipment (1) connected to a structure (2) provided with shutter (3) which contains a pointer device (5) and a radiations sensor (4), which after having detected the thermologic parameters of the process, sends them to computer (9) which processes, visualizes and registers them to control and regulate the distribution of the service temperatures in the course of the process.

WO 2004/011891 A3



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01J5/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| Y | US 3 933 044 A (LOPER D ROGER ET AL) 20 January 1976 (1976-01-20) column 4, line 28 - line 44 | 1 |
| Y | US 3 101 618 A (HANCE RICHARD J) 27 August 1963 (1963-08-27) the whole document | 1 |
| A | US 3 596 519 A (BLONDER FRED ET AL) 3 August 1971 (1971-08-03) the whole document | 1 |
| A | EP 1 065 484 A (HOLLANDER MILTON BERNARD) 3 January 2001 (2001-01-03) the whole document | 1 |
| | -/-- | |



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

24 September 2004

Date of mailing of the international search report

30/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Ramboer, P

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| A | FR 2 082 719 A (HEURTEY SA) 10 December 1971 (1971-12-10) figures ----- | 1 |
| A | US 3 160 009 A (CARNEY DELMAR E) 8 December 1964 (1964-12-08) figure 3 ----- | 1 |
| A | US 6 091 444 A (MCCARVILLE THOMAS J ET AL) 18 July 2000 (2000-07-18) abstract; figures ----- | 1 |

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|---|---------------------|----------------------------|---------------------|
| US 3933044 | A | 20-01-1976 | CA 997031 A1 | 14-09-1976 |
| US 3101618 | A | 27-08-1963 | GB 917343 A | 06-02-1963 |
| US 3596519 | A | 03-08-1971 | NONE | |
| EP 1065484 | A | 03-01-2001 | CA 2313360 A1 | 02-01-2001 |
| | | | CA 2313370 A1 | 02-01-2001 |
| | | | EP 1065483 A1 | 03-01-2001 |
| | | | EP 1065484 A2 | 03-01-2001 |
| | | | JP 2001100148 A | 13-04-2001 |
| | | | JP 2001099713 A | 13-04-2001 |
| | | | US 2002146045 A1 | 10-10-2002 |
| | | | US 6377400 B1 | 23-04-2002 |
| | | | US 6614830 B1 | 02-09-2003 |
| | | | CA 2319880 A1 | 17-03-2001 |
| | | | EP 1085307 A1 | 21-03-2001 |
| | | | JP 2001166256 A | 22-06-2001 |
| FR 2082719 | A | 10-12-1971 | FR 2082719 A5 | 10-12-1971 |
| US 3160009 | A | 08-12-1964 | NONE | |
| US 6091444 | A | 18-07-2000 | DE 19854441 A1 | 02-06-1999 |
| | | | FR 2771579 A1 | 28-05-1999 |
| | | | JP 11234545 A | 27-08-1999 |